Radiotherapy to the face or neck (shell)
What is radiotherapy?
Radiotherapy treats cancer by using high energy X-rays. These X-rays destroy cancer cells while doing as little harm as possible to normal cells. Radiotherapy is often given following surgery or it may be given instead of surgery if the tumour can’t be removed surgically.

Radiotherapy is completely painless and usually takes between 10 – 20 minutes to give.

How often do I need treatment?
Radiotherapy is usually given as a course of treatment. It is given daily during the week with a break at weekends. The course may last from 4 to 7 weeks. Your oncologist (cancer specialist) will decide how many treatments you need and will explain why.

What is a planning scan?
Before you start radiotherapy it is essential that we plan very carefully where the treatment is to be given. The most accurate way of doing this is by doing a CT scan. This scan is done within the oncology department and takes about 10-20 minutes.
We will need to make a head shell for you to wear during treatment. This will be done in the scanning room before the scan. It is made using thermoplastic material which is soaked in warm water to make it soft. When soft, it is moulded across your face and neck, and as it cools the material becomes rigid. It is then fastened to a special head board which you will be lying on. Making the head shell takes about 10 minutes.

It may be necessary to give you an injection of contrast during your scan. The contrast enhances the CT image to enable your oncologist to plan your treatment more accurately. The contrast is given via a cannula (fine tube) which is inserted into a vein in your arm or hand.

**What happens on my first day of treatment?**

1. One of the radiographers will collect you from the waiting room and explain exactly how the treatment is to be given.

2. You will be taken into the treatment room and asked to lie down on the couch with your head on a special head pad. Your head shell will be fitted and the couch will be moved into the treatment position.

3. The radiographers will take several minutes ensuring everything is aligned correctly. They will then leave the room to begin the treatment. The radiographers are able to see and hear you from outside the treatment room and can speak to you during treatment if you feel this may help you.

For the first few days of your radiotherapy, the radiographers will do a short CT scan before commencing treatment to ensure that your position in the shell is correct. The whole process takes about 20 minutes.

**What side effects can I expect?**

**Short term side effects**

These are likely to happen during and immediately after radiotherapy. We will monitor these side effects carefully. You will see a review radiographer or your oncologist weekly throughout your treatment. You will also see the dietitian, speech therapist and nurse specialist weekly.

- **Skin soreness** – your skin may become very red and sore. Wash with non-perfumed soap and apply a non-perfumed moisturising lotion to your skin.
Do not apply make up to the treated area or wet shave, and avoid sun exposure. Your skin may blister later in the treatment. If this happens we will give you suitable dressings and antibiotics if necessary.

- **Sore mouth and throat** – your mouth, tongue, lips and throat will become very sore and dry and you will be prone to fungal infection called thrush. You may notice taste changes and loss of appetite due to a dry mouth and swallowing will be painful. It is important to maintain good oral hygiene and the following tips may help:
  - use a soft toothbrush and fluoride toothpaste
  - use the mouthwash provided by your oncologist
  - clean any dentures regularly
  - drink plenty of fluids, but avoid alcohol
  - **do not smoke** as this will worsen reactions and reduce effectiveness of the radiotherapy.

You will notice that your saliva becomes thick and stringy, it may become discoloured and cause you to feel nauseated. This can sometimes be helped with a course of liquid antibiotic.

- **Weight loss** – you may lose weight due to problems eating, but the dietitians will monitor this and advise you accordingly.

- **Tiredness** – you may feel increasingly tired during the radiotherapy and for several months afterwards.

- **Nausea** – this may be a problem but can be controlled with anti-sickness medication.

**Are there any long term side effects?**

Long term side effects may occur months or years after radiotherapy. Improved planning and treatment techniques have made these less likely to happen.

- **Dry mouth** – this may remain a long term problem if your salivary glands have been irradiated.

- **Altered taste** – may also continue as it is associated with lack of saliva.

- **Skin changes** – damage to the skin can lead to telangiectasis, which causes a thread vein appearance in the treated area.

- **Dental problems** – caused by the effect of the X-rays on the gums and nerves of the teeth.
• Cataracts – these are likely to form if the area treated was close to the eyes.
• **Spine damage** – this is very rare and is caused by high dose of X-ray to your cervical spine.
• **Osteoradionecrosis** – is a very rare complication which can damage the jaw bone and teeth. This is usually only possible if chronic infection is present in your mouth and teeth.

**What will happen after my radiotherapy has finished?**
The short term side effects will gradually settle, although this will take several months. It is important to continue with good oral hygiene and visit your dentist regularly.

You will be sent an appointment to see a review radiographer along with the dietitian two weeks after you have completed your treatment, and you will be seen in the joint ENT clinic four weeks after your treatment is complete.

You will be given contact numbers for the review radiographer and the nurse specialist and can ring them at any time if you are worried or feeling unwell.

**Data Protection**
All personal details and photographs taken during radiotherapy will be used in accordance with this Trust’s policy on protection and use of patient information.

During the course of radiotherapy X-rays may be taken to check the positioning of the treatment area.
If you would like this leaflet in large print, braille, audio version or in another language, please contact the Patient Advice and Liaison Service (PALS) on 01872 252793